

Work Order ID 162482***162482***

Page 1

Tuesday, June 06, 2017 4:57:34 PM

Item ID: 646.3310 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: LH Half - Upper Cutter Assembly **(5)**
Start Date: 6/8/2017 Start Qty: 8.00 ***8*** Cust Item ID:
Required Date: 6/29/2017 Req'd Qty: 8.00 ***8*** Customer:
Reference:

Approvals: Process Plan: DAS 21 9-89 Date: JUN 08 2017 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
646.3300	N/C3

110

3.91

110

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

3.19

HAAS CNC vertical machine #1

1-Machine per folio FB154

DWG REV: 10-2FOLIO REV: AA

Blank 13.375

2- deburr and break all sharp edges

51by KT 17-06-13.

120

0.00

120

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.08

Quality Control

50by KT 17-06-13.

DQA:

Date: 17-06-14



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date: AUG - 2 2017

Work Order update only ☐

Work Order: 162482		DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. 646:3310		Rework ☐		Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐		
NCR No. 17-6568		Scrap ☒		Machining ☒	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐		
		Use-as-is ☐		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐		
		Suspected Unapproved ☐		Large Fab ☐	Composite ☐	Supplier ☐			
Date: 17-06-14		Step #: 110		QTY Effective: 1			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition			PD 17-06-14		
The Part lifted out of the jig causing the tool to badly mark the Part & also causing the part to be under tolerance				Scrap & Replace B 137365			Completed By		
							17-06-14		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		
							PD 17-06-14		
Root Cause				FAULT CATEGORY					
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☒	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☒				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER :									

Work Order ID 162482

162482

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Tuesday, June 06, 2017 4:57:34 PM

Item ID: 646.3310 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: LH Half - Upper Cutter Assembly
 Start Date: 6/8/2017 Start Qty: 8.00 ***8*** Cust Item ID:
 Required Date: 6/29/2017 Req'd Qty: 8.00 ***8*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
155 *155* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo 2.1 mils thickness grinner	0.00 0.16				5			DAS 38 9-89 JUN 26 2017
180 *180* Packaging Packaging	Identify as per dwg & Stock Location: <u>CK022</u> Memo ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***	0.00 0.08				5			DAS 6 9-89 JUN 27 2017
190 *190* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.08							17/1/28 98

(Signature) UM 7/27/17

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause			FAULT CATEGORY		
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐			
Misidentified ☐	Past Due ☐				

Picklist Print

Monday, June 05, 2017 4:53:58 PM

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Work Order ID: 162482

162482

Parent Item: 646.3310

646.3310

Parent Item Name: LH Half - Upper Cutter Assembly

Start Date: 6/8/2017

Required Date: 6/29/2017

Start Qty: 8.00

Required Qty: 8.00

Comments: IPP REV:A NEW ISSUE 12/11/17 JFS VERIFY BY: JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B7.000X2.000		Purchased			No	110	f	11.1500	1.115	9.389474			

M7075T6B7 000X2 000

7075-T6 BAR 7.000" X 2.000" (order in billets - 13.375")

Location

Loc Qty

Loc Code

MAT001

11.150001

m137090

0.000001

m137365

11.15

5.525
P.125

KA.
17-06-13

DART AEROSPACE LTD		Work Order: 162482
Description: LH Half		Part Number: 646.3310
Inspection Dwg: 646.3300 Rev: NC3		Page 1 of 1

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
7.296	+/-0.005	7.296			H-G	31006
3.767	+/-0.005	3.767			" "	" "
0.457	+/-0.005	0.457			" "	" "
0.313	+/-0.005	0.313			" "	" "
0.710	+/-0.005	0.710	✓		H-G	31006
6.469	+/-0.005	6.469			" "	" "
10.116	+/-0.005	10.116			" "	" "
10.309	+/-0.005	10.309			" "	" "
Ø0.177	+0.005/-0.001	0.177	✓		vern	K+-05
Ø0.209	+0.005/-0.001	0.209	✓		" "	K+-05
0.250	+/-0.005	0.252	✓		Micrometer	K+-01
1.250	+/-0.005	1.251	✓		Micrometer	K+-07
R0.125	+/-0.005	0.125	✓		R-G	—
3.513	+/-0.005	3.514	✓		vern	K+-05
8.375	+/-0.005	8.377	✓		H-G	31006
0.250	+/-0.005	0.251	✓		Micrometer	K+-01
8.1°	+/-0.5°	8.1°	✓		A-G	CNC-17
11.689	+/-0.005	11.687	✓		H-G	31006
11.250	+/-0.005	11.252	✓		" "	" "
0.200 x 45°	+/-0.005	0.205 x 45	✓		vern	K+-05

Measured by: Kt/b.e	Checked by: DAS	QC Inspector:
Date: 17-06-13	Date: 17-06-15	Date:

Engineering Approval: (if necessary)	Date:
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Rev	Date	Change	Revised by	Approved
A	14.06.25	New Issue	KJ	
B	16.08.29	Dwg Rev updated	KJ	

APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

04765

SHEET 1 OF 1

DWG NO. 646.3300

REV: NC

PREPARED BY J. SOTO

DATE: 12/08/2014

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: UPPER CUTTER ASSY

APPROVED BY: ENGR *[Signature]*

MFG *[Signature]*

QC *[Signature]*

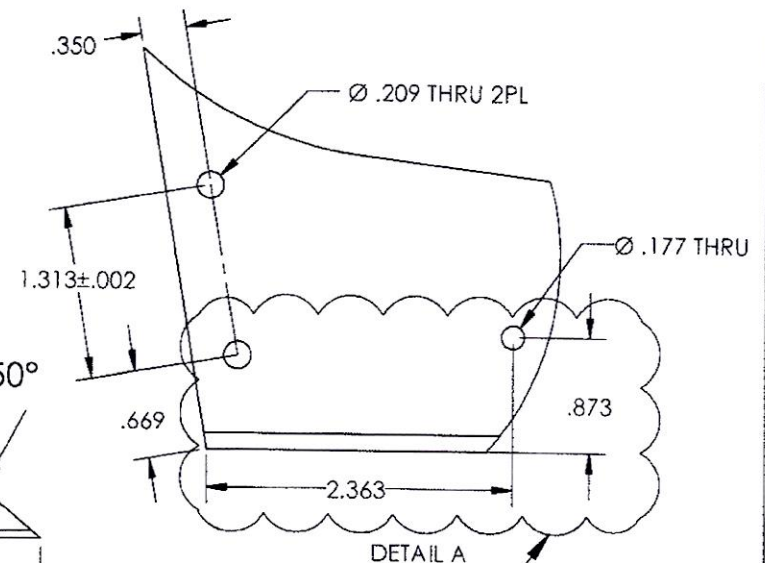
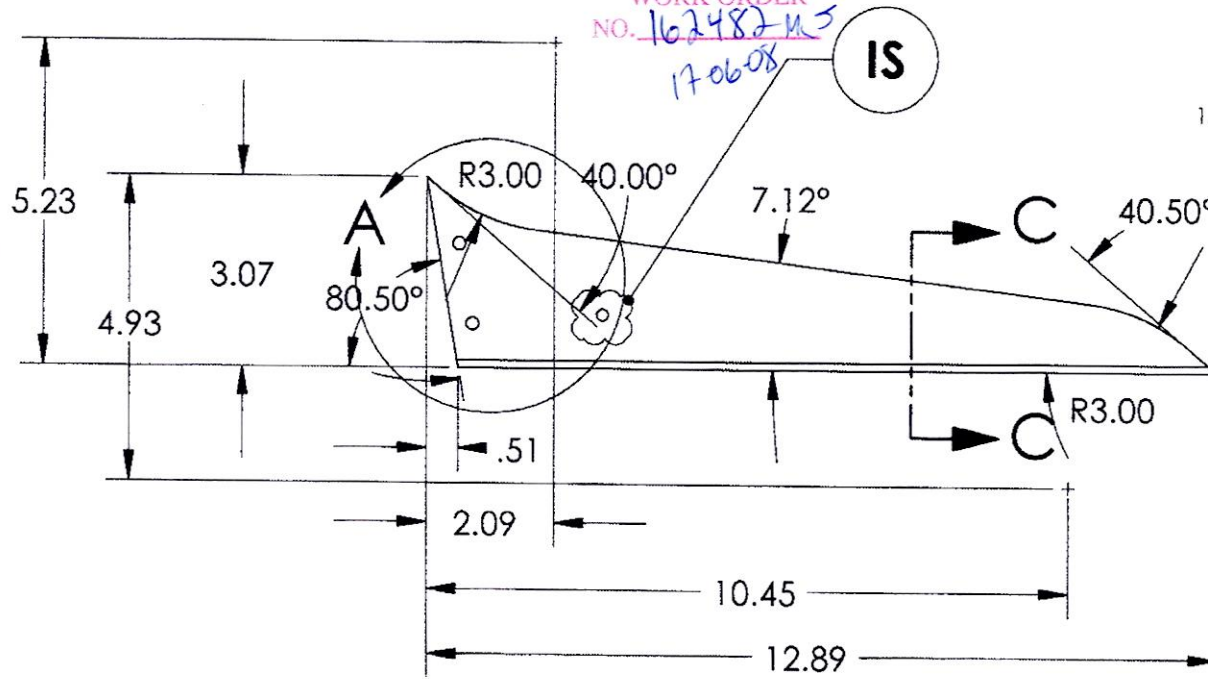
EFF. NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: ADDED HOLE DIMENSION TO 646.3313.

SHEET 5 IS:

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *162482 M.S.*
170608



IS

DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

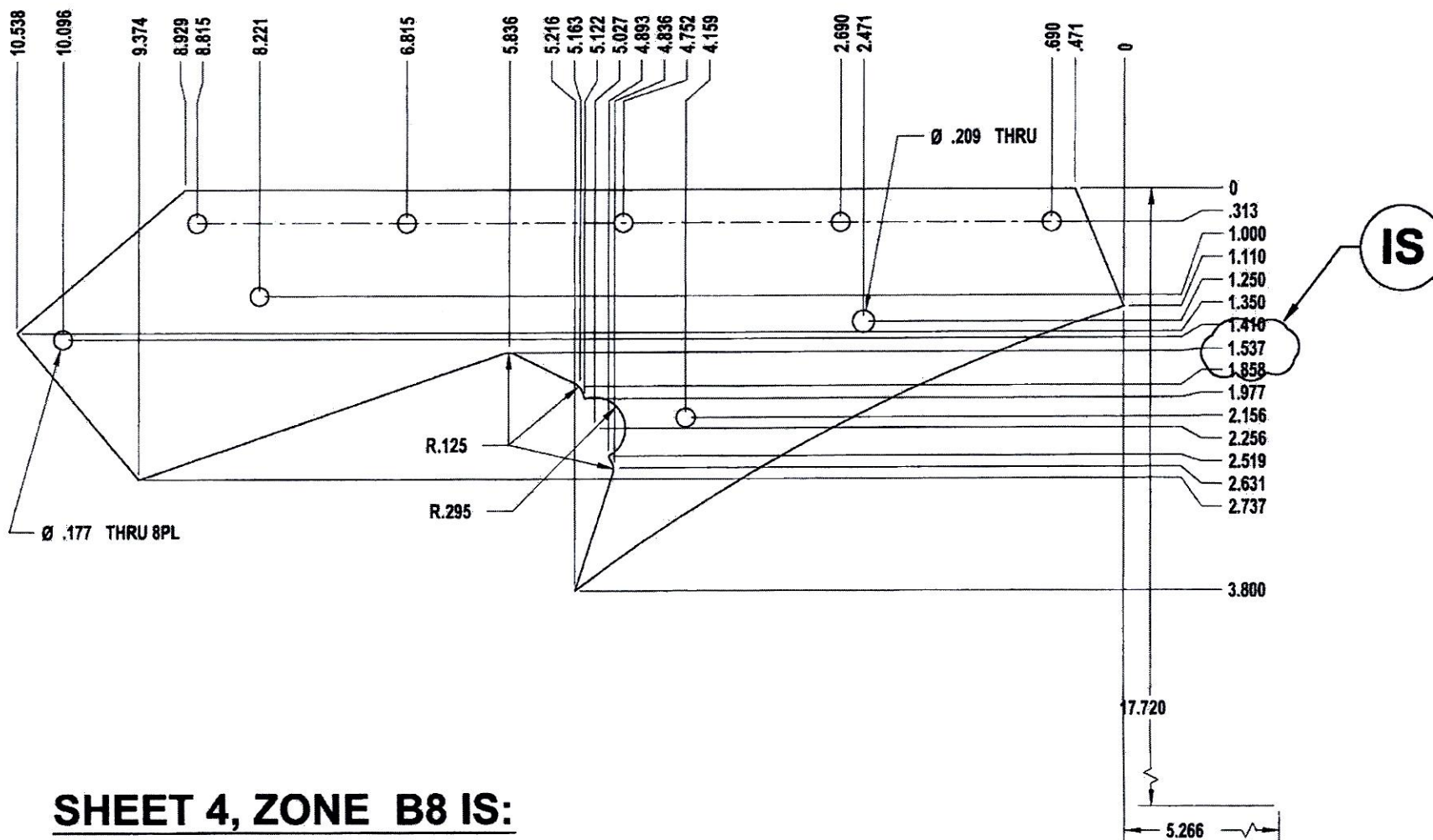
CHANGE CATEGORY

☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED

☐ YES ☒ NO

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03724				SHEET 1 OF 1	
	DWG NO. 646.3300	REV: N/C	PREPARED BY B. PETERS	DATE: 12/05/12	EFFECT ON DWG ☐ INC. ☒ UNINC.	
	DWG TITLE: UPPER CUTTER ASSY					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER		
TRANSACTION CODES (TC) A-ADD C-CREATE R-REVISE D-DELETE	REASON: REVISED ORDINATE DIMENSION.				ECR: D-12-025	

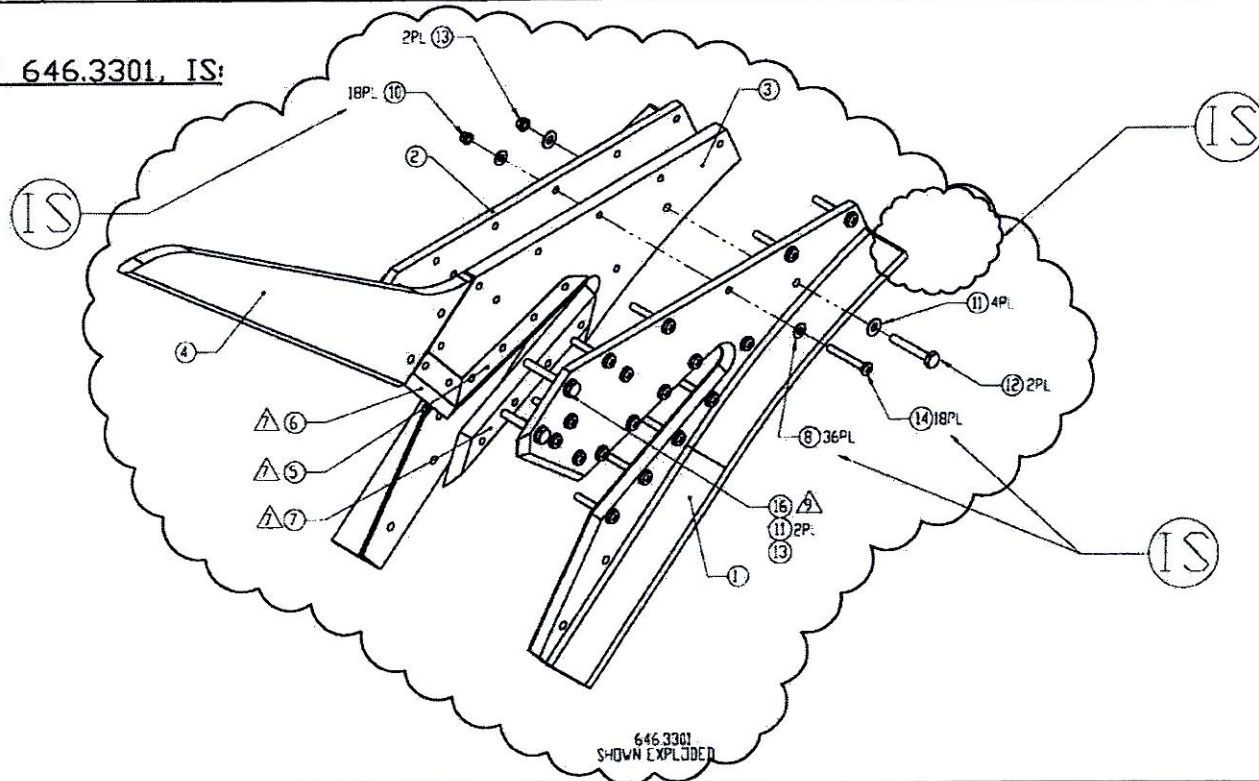


SHEET 4, ZONE B8 IS:

DOCUMENTS EFFECTED:	☐ RFMS ☐ MDL ☐ INSTALL INSTRUC ☐ ICA ☐ BOM	CHANGE CATEGORY ☐ MAJOR ☒ MINOR	DER REVIEW REQUIRED ☐ YES ☒ NO
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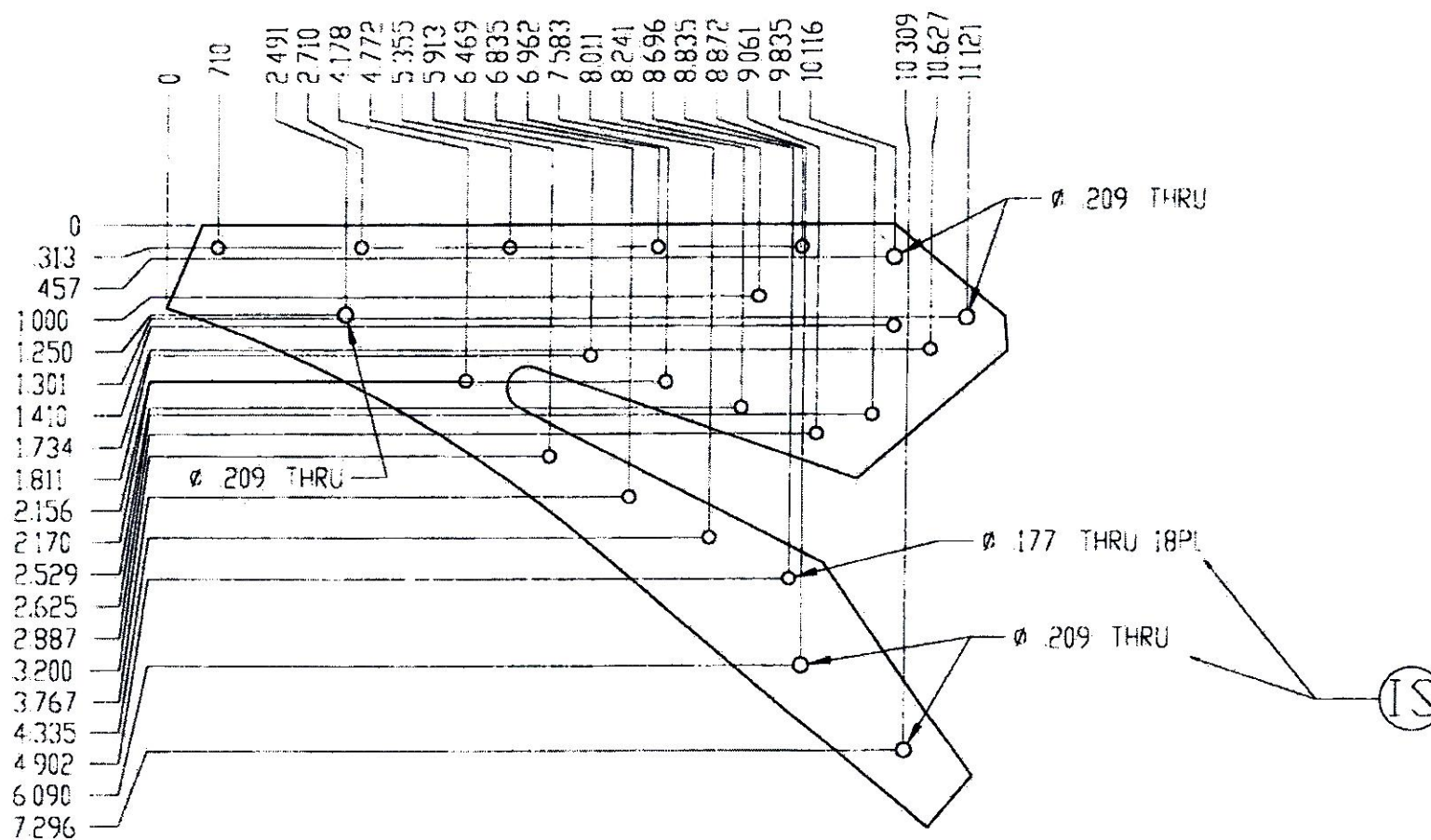
APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 02196		SHEET 1 OF 2	
	DWG NO. 646.3300	REV: N/C	PREPARED BY S. HUFF	DATE: 01/05/09
	EFFECT ON DWG ☐ INC. ☒ UNINC.			
DWG TITLE: UPPER CUTTER ASSY				
APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER	
REASON: REMOVED RIVETS IN FAVOR OF ADDITIONAL SCREWS				
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE				

SHEET 1, VIEW 646.3301, IS:



14	R	601.2765	18	SCREW	MS27039-0819
10	R	601.1541	18	LOCKNUT	MS21042L08
9	D	601.2766	3	RIVET	MS20470AD5-18
8	R	601.2764	36	WASHER	NAS1149FN832P
			3301		
F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION
DOCUMENTS EFFECTED:					CHANGE CATEGORY ☐ MAJOR ☒ MINOR
☐ MDL ☒ INSTALL INSTRU ☒ ICA ☐ FMS ☒ BOM					DER REVIEW REQUIRED ☐ YES ☒ NO

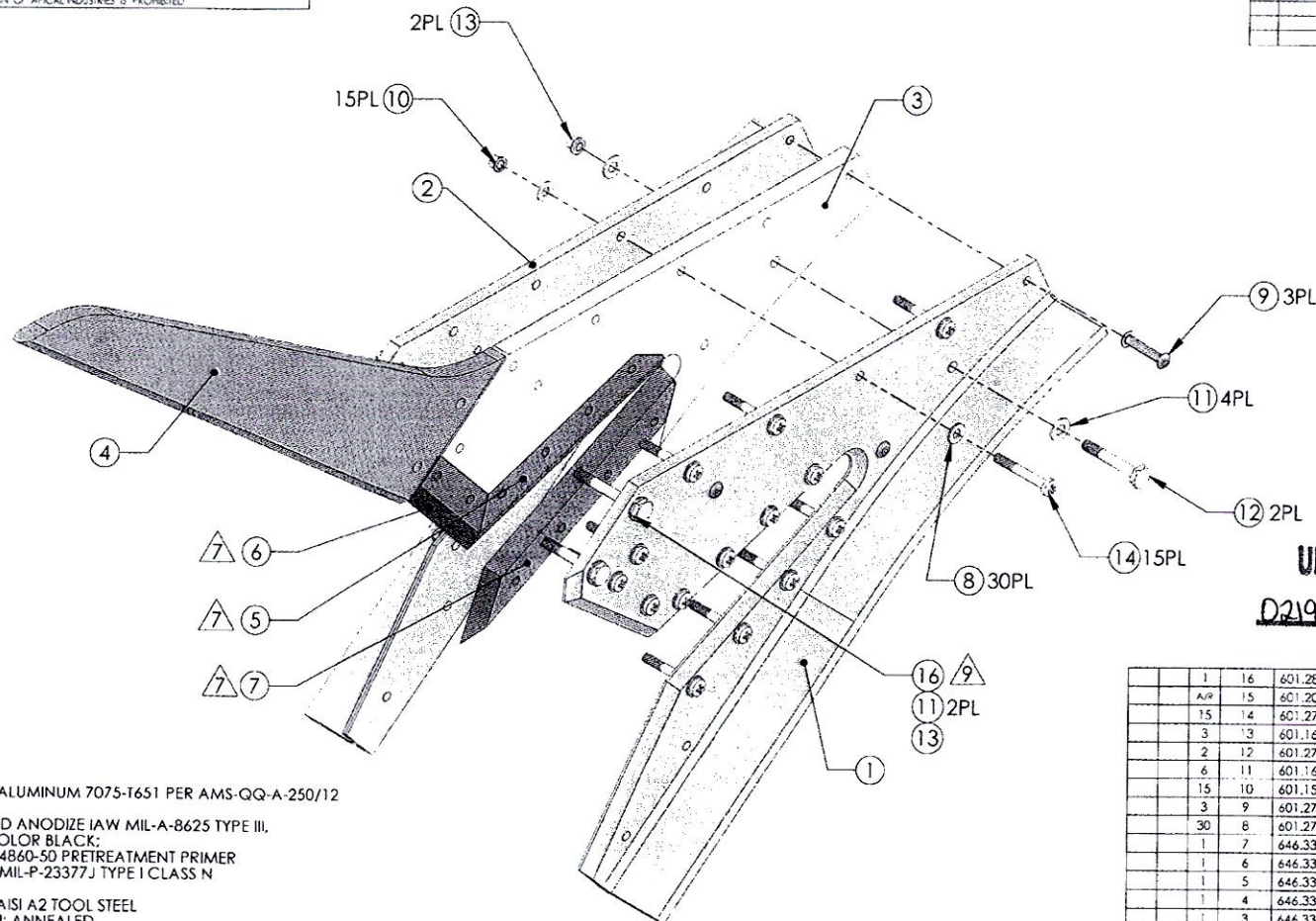
SHEET 3, SECTION VIEW A-A, IS:



F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



UNINCORPORATED ECN(S)

02196, 03724, 04765

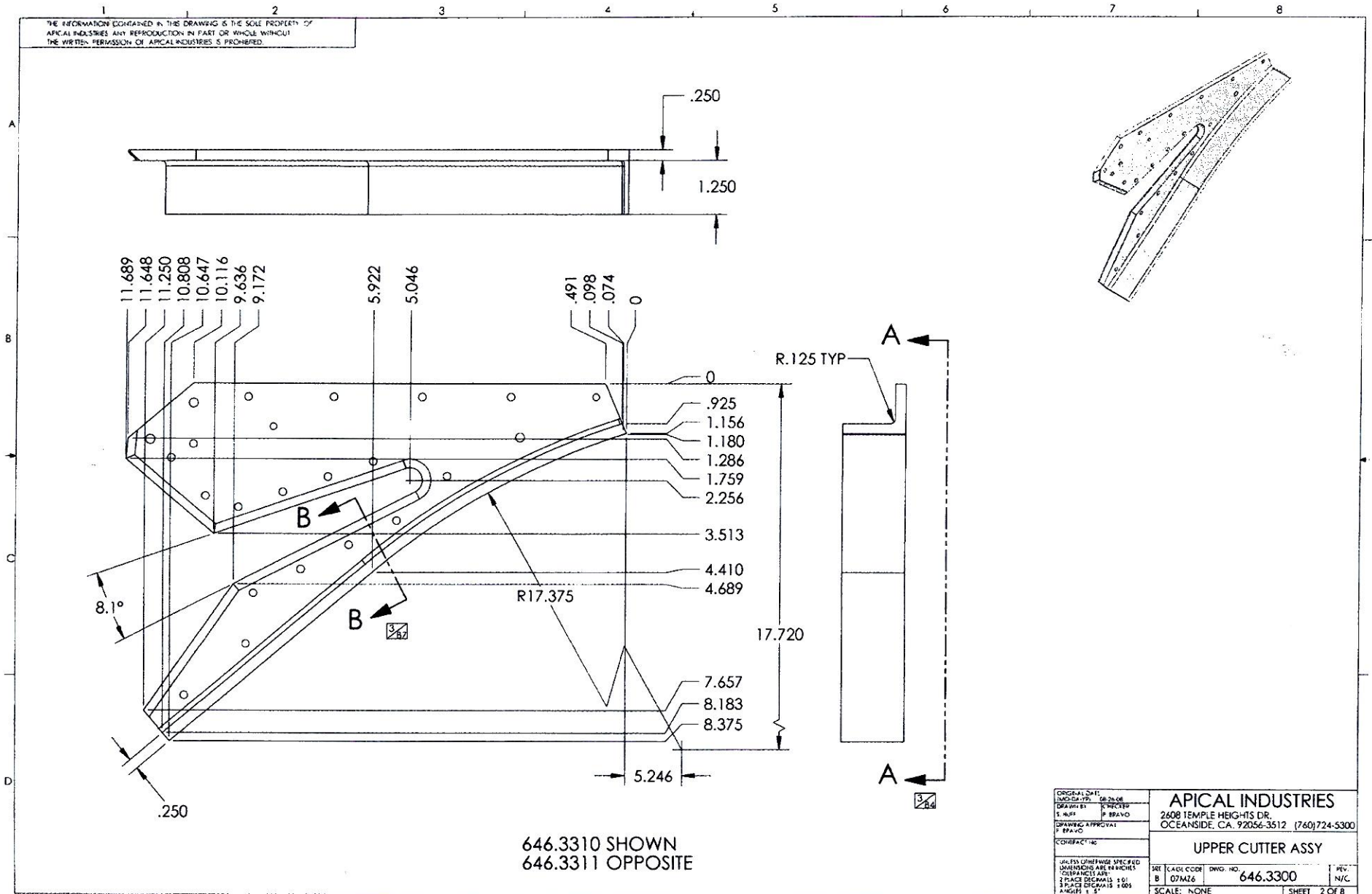
NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; CARDINAL 4860-50 PRETREATMENT PRIMER PRIME IAW MIL-P-23377J TYPE I CLASS N
- 3 MATERIAL: AISI A2 TOOL STEEL
CONDITION: ANNEALED
POST PROCESS: HEAT TREAT TO 58-62 Rc ROCKWELL HARDNESS
- 4 FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N
5. DEBURR AND BREAK ALL SHARP EDGES EXCEPT WHERE OTHERWISE NOTED
6. IDENTIFY IAW MPP-120
- 7 APPLY F/N 15 AS REQUIRED TO ALL FAYING SURFACES OF F/N 5, 6 & 7 UPON ASSEMBLY
- 8 CUTTING EDGE INTENDED TO BE SHARP, DO NOT BREAK SHARP EDGE
- 9 INSTALL FASTENER FINGER-TIGHT

646.3301
SHOWN EXPLODED

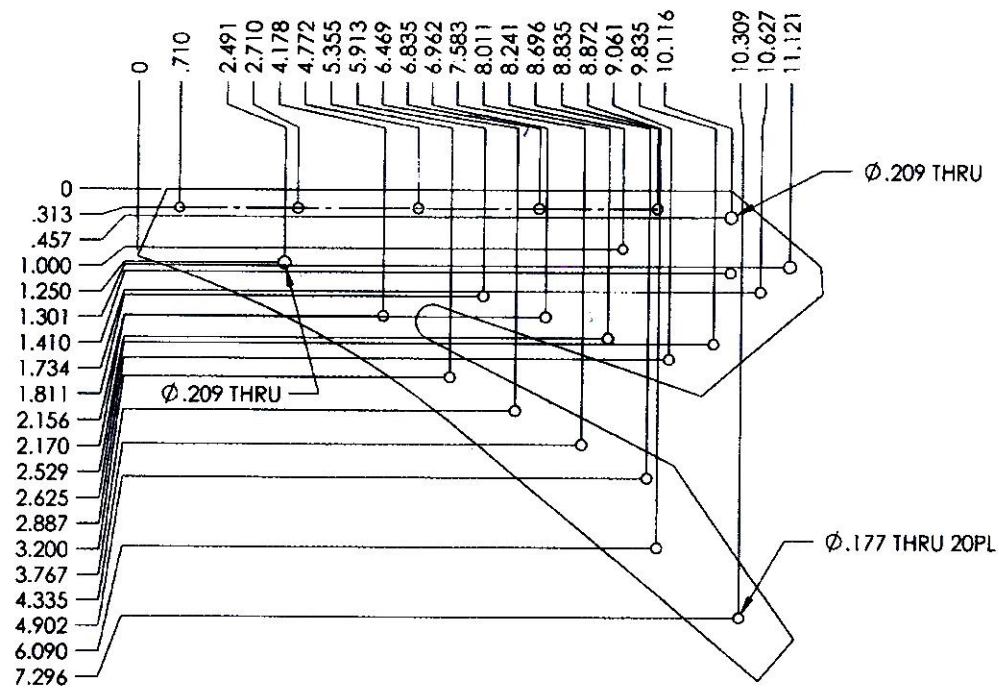
QTY	FIND #	PART #	DESCRIPTION	MATL	SPEC.
1	16	601.2834	BOLT	AN2 14A	
A/R	15	601.2045	RTV, LOCTITE 598		
15	14	601.2765	SCREW	MSS2038-GR19	
3	13	601.1624	LOCKNUT	MSS2046G23	
2	12	601.2763	BOLT	AN2-12A	
6	11	601.1607	WASHER	MSS114910320	
15	10	601.1541	LOCKNUT	MSS1042108	
3	9	601.2766	RIVET	MSS20470A-D5-18	
30	8	601.2764	WASHER	MSS114910320	
1	7	646.3316	BLADE		△
1	6	646.3315	BLADE		△
1	5	646.3314	BLADE		△
1	4	646.3313	UPPER GUIDE		△
1	3	646.3312	CENTER PLATE		△
1	2	646.3311	RH HALF		△
1	1	646.3310	LH HALF		△
1		646.3301	UPPER CUTTER ASSY		△
QTY	FIND #	PART #	DESCRIPTION	MATL	SPEC.
PARTS LIST					
ORIGINAL DATE: 02-26-08					
DRAWN BY: P. M. V. D.					
CHECKED BY: P. M. V. D.					
DRAWING APPROVAL: 60					
CONTRACT NO.					
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES					
TOLERANCES ARE: .01					
3 PLACE DECIMALS: .01					
ANGLES: 1/2°					
NEXT ASSY (S)					
646.4000					
APICAL INDUSTRIES					
2608 TEMPLE HEIGHTS DR.					
OCEANSIDE, CA 92056-3512 (760) 774-5300					
UPPER CUTTER ASSY					
REV: 07/02/06 DWO: NO					
B 07/02/06 646.3300					
SCALE: NONE					
SHEET 1 OF 8					

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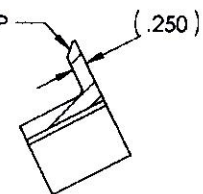
ORIGINAL DATE: 08-28-08		APICAL INDUSTRIES	
DRAWN BY: P. REEDER		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: P. REEDER		OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL: P. REEDER		UPPER CUTTER ASSY	
CONTRACT NO.		SHEET 2 OF 8	REV. N/C
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		SCALE: NONE	
2 PLACE DECIMALS ±.01			
3 PLACE DECIMALS ±.005			
ANGLES ±.5°			

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SECTION A-A

.200 X 45.0° TYP

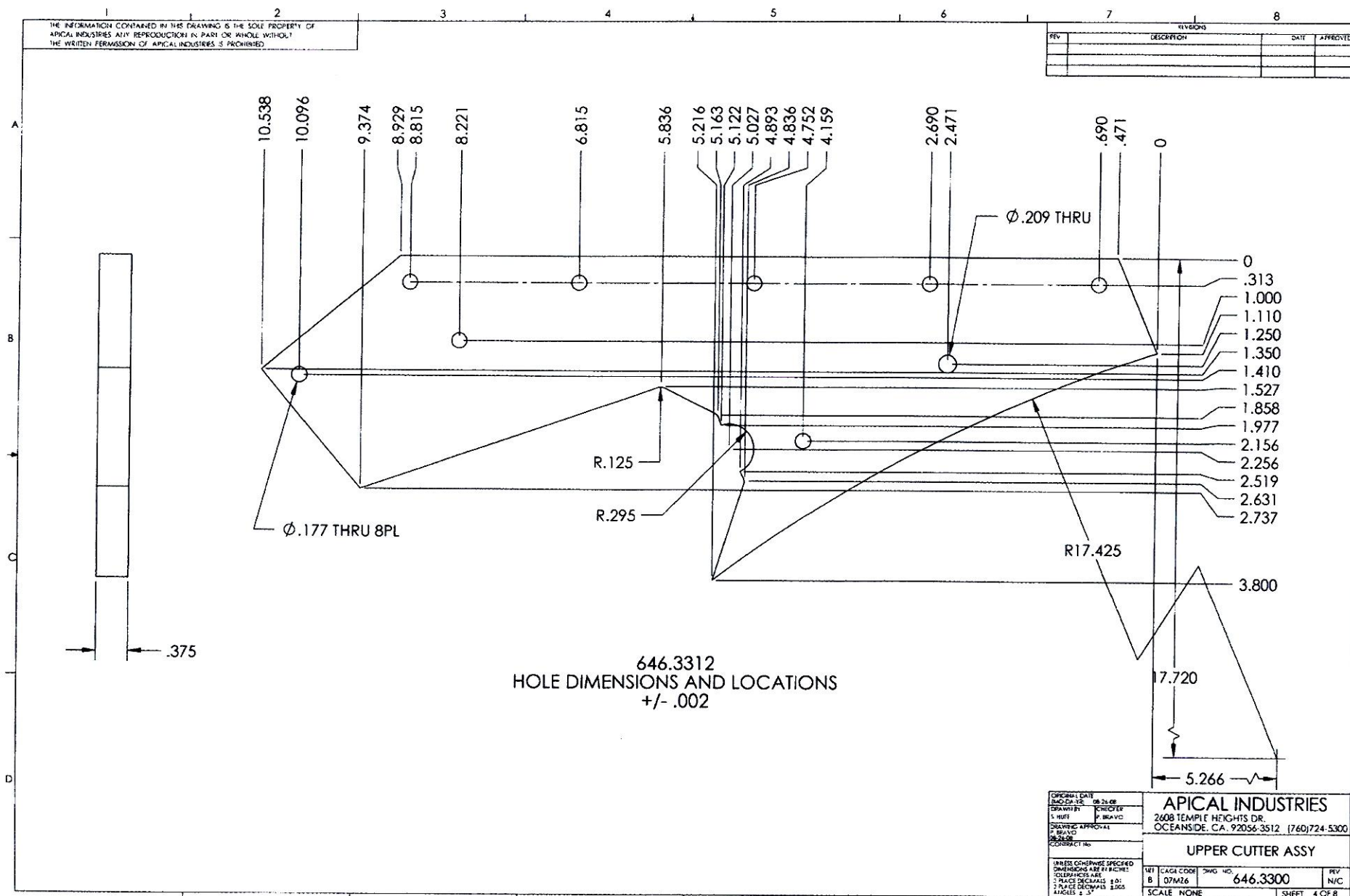


SECTION B-B

ORIGINAL DATE 04-24-78		APICAL INDUSTRIES	
DRAWN BY J. HUP		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DESIGNED BY J. HUP		UPPER CUTTER ASSY	
CHECKED BY J. HUP		MTL DATA CODE B 071A26	REV N/C
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS ARE 2 PLACES DECIMALS IS: 3 PLACES DECIMALS IS: ANGLES 1/2°		SCALE NONE	SHEET 3 OF 8

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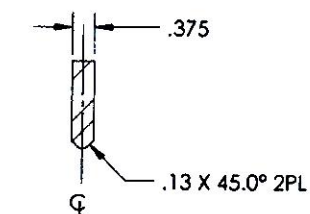
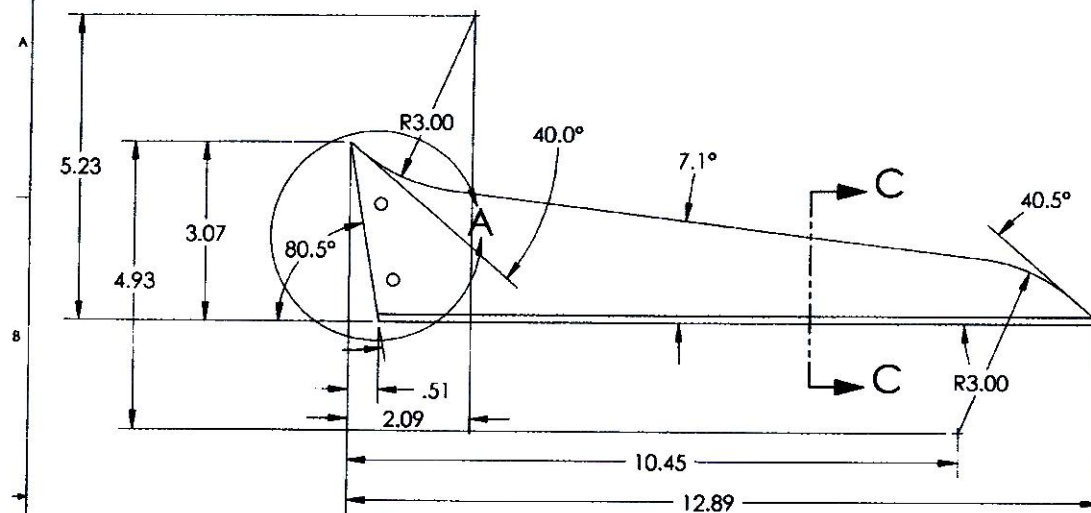
REV	DESCRIPTION	DATE	APPROVED



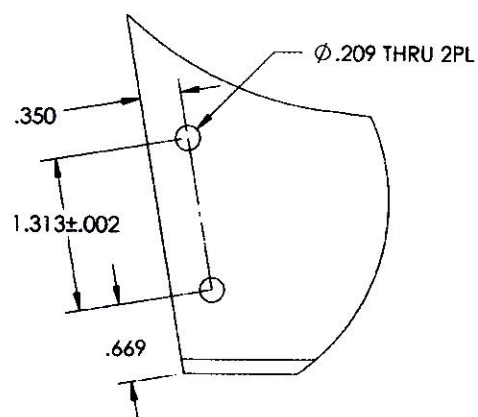
ORIGINAL DATE: 08/24/08 DRAWN BY: S. HUFF CHECKED BY: P. BEAVER DRAWING APPROVAL: P. BEAVER CONTRACT NO.:		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1. PLACE DIMENSIONS ±.01 2. PLACE DIMENSIONS ±.005 3. ANGLES ±.5°		MFG CODE: B DWG NO.: 646.3300	REV: N/C SCALE: NONE SHEET: 4 OF 8

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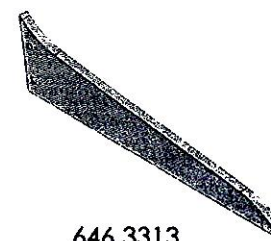
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



SECTION C-C



DETAIL A

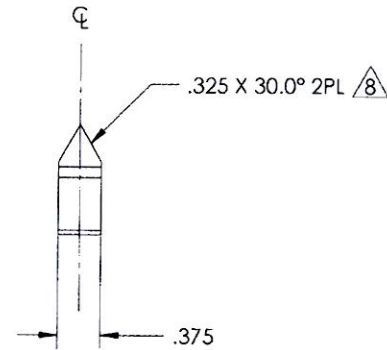
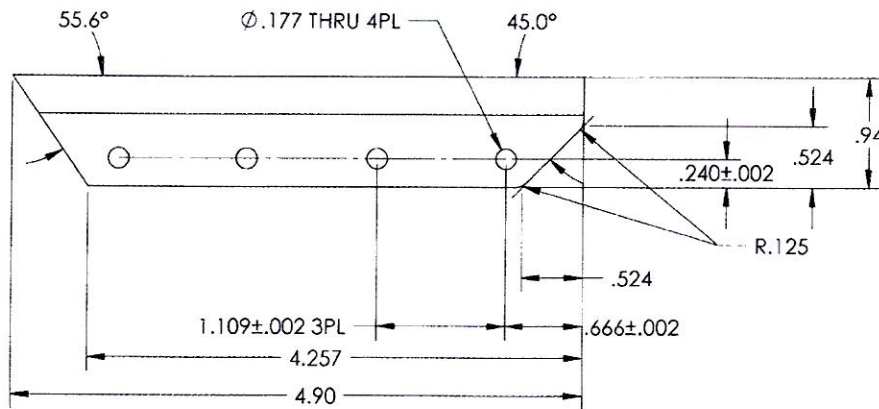
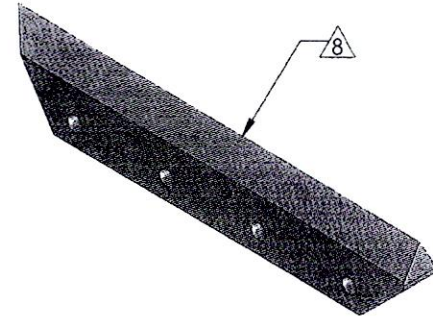


646.3313

ORIGINAL DATE: 08-20-08 DRAFTER: J. HUFF CHECKER: J. HUFF DRAWING APPROVAL: J. BRAVO DATE: 08-20-08 COMPANY: APICAL INDUSTRIES	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 4 PLACE DECIMALS ± .001	UPPER CUTTER ASSY REV: 07/02/06 DWS: 646.3300 NVC
SCALE: NONE	SHEET: 5 OF 8

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

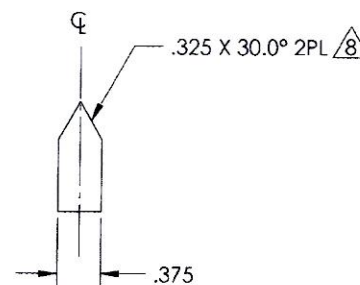
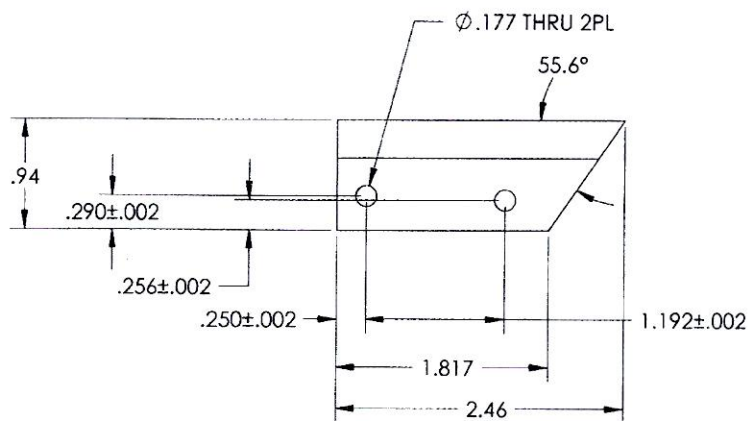
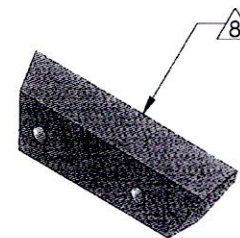


646.3314

ORIGINAL DATE 1-10-1981 BY: JWB		APICAL INDUSTRIES	
DRAWN BY: JWB		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: JWB		OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWING APPROVAL: JWB		UPPER CUTTER ASSY	
CONTRACT NO:		101 CADA CODE	REV
2 PLACES OTHER THAN SPECIFIED		B 07M26	646.3300
DIMENSIONS ARE IN INCHES		SCALE NONE	SHEET 6 OF 8
TOLERANCES ARE:			
1 PLACE DECIMALS ±.01			
2 PLACES DECIMALS ±.005			
ANGLES ±.5°			

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

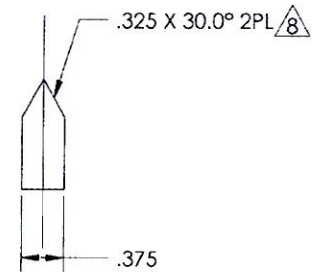
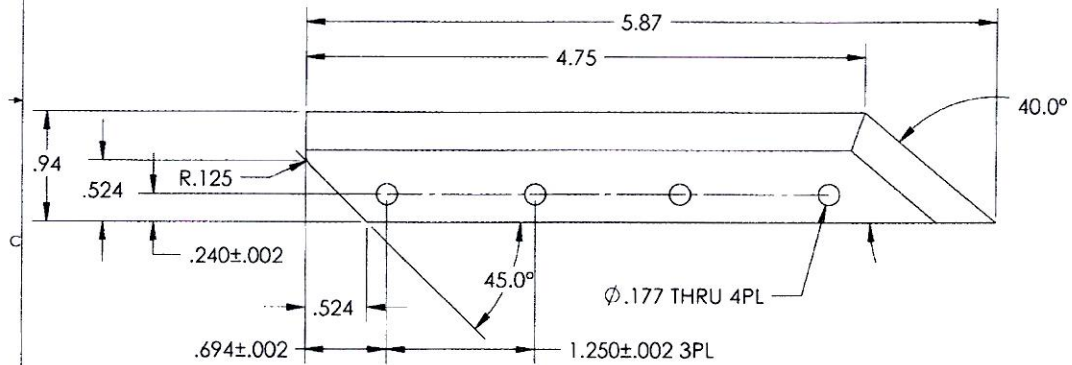
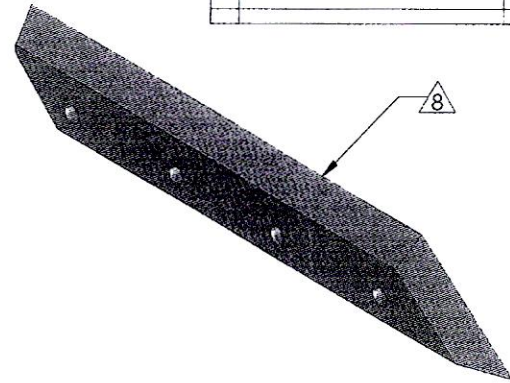


646.3315

DRAWN BY: S. HUNT CHECKED BY: P. BRAVO DRAWING APPROVAL: P. BRAVO CONTRACTING:		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SHEET CODE: B 07AM76 SCALE: NONE	PART NO: 646.3300 REV: N/C SHEET: 7 OF 8

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REVISE			
REV.	DESCRIPTION	DATE	APPROVED



646.3316

ORIGINAL DATE (MO/DA/YR)	08-26-68	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300														
DRAWING NO.	5-BRAVO															
DRAWING REVISION																
DRAWING REVISION		UPPER CUTTER ASSY														
DRAWING REVISION																
DRAWING REVISION																
DRAWING REVISION																
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DIMENSIONS ARE 2 PLACE DECIMALS ± .005 3 PLACE DECIMALS ± .002 ANGLES ± .5°	<table><tr><td>REF.</td><td>CAGE CODE</td><td>MFG. NO.</td><td>REV.</td></tr><tr><td></td><td>07M76</td><td>646.335</td><td>N/C</td></tr><tr><td colspan="3">SCALE NONE</td><td>SHEET 8 OF 8</td></tr></table>				REF.	CAGE CODE	MFG. NO.	REV.		07M76	646.335	N/C	SCALE NONE			SHEET 8 OF 8
REF.	CAGE CODE	MFG. NO.	REV.													
	07M76	646.335	N/C													
SCALE NONE			SHEET 8 OF 8													



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO36731**

Purchase Order Date 6/16/2017

PO Print Date 6/28/2017

Page Number 10 of 16

Order From :

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

VC-ATG001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 613-446-4544

Ship To Contact

Ship To Phone

Ship Via: VENDOR'S TRUCK

Ship Acct:

22 162482

646.3310 LH UPPER
CUTTER REV. N/C

7/7/2017

Yes

7/7/2017

AS PER MPP-172 SECTION 2.1,
HARD ANODIZE COLOR BLACK, PER IAW MIL-A-8625 TYPE 3 CLASS 2
AS PER MPP-172 SECTION 4.2,
PRIME AS PER IAW MIL-PRF-23377 TYPE 1 CLASS N

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

5.00

\$18.10

\$90.50

DAS
38
9-89

817-7-25

Line Total:

\$90.50

23 161668

646.3717 DOUBLER
REV. A

7/21/2017

Yes

7/21/2017

AS PER MPP-172 SECTION 2.1,
HARD ANODIZE COLOR BLACK, PER IAW MIL-A-8625 TYPE 3 CLASS 2
AS PER MPP-172 SECTION 4.2,
PRIME AS PER IAW MIL-PRF-23377 TYPE 1 CLASS N

12.00

\$6.25

\$75.00

Line Total:

\$75.00

PO Instructions: PRIMER IS SUPPLIED BY DART

Note:

6/28/2017



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913570

Date: 21-Jul-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
5 ea	Part: 646.3310 LH Upper Cutter Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils) per drawing. Job: 21245	Rev: N/C PO: PO36731 Line: 22	OAS 38 9-89
15 ea	Part: 647.0310 Channel Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils) per drawing. Job: 21268	Rev: N/C PO: PO36731 Line: 36	
CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: <u>21/07/2017</u> Certified Signature: <u>[Signature]</u> Receiver Signature: <u>[Signature]</u> A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt. Made in Canada.			